

# Work Order ID 52423

September 23, 2009 1:58:57 PM

Page 1

Item ID: D206-642-541

Reference:

Revision ID: M

Item Name: Replacement Skidtube

Start Date: 9/25/09

Start Qty: 1.00

Cust Item ID:

Required Date: 10/08/09

Req'd Qty: 1.00

Customer ID:

Customer Name:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

## Hours

Sequence ID	Work Center ID	Operation Description	Set Up	Run	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

IIN-D206-642

Rev M

100

DC

0.00

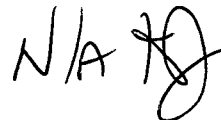
0.00

Document Control

DOCUMENT CONTROL

Memo

Photocopy bluefile & type labels per PPP D206-642-541 CHG003

N/A 

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval/ Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 52423

September 23, 2009 1:58:58 PM

Page 2

Item ID: D206-642-541

Reference:

Revision ID: M

Item Name: Replacement Skidtube

Start Date: 9/25/09

Start Qty: 1.00

Cust Item ID:

Required Date: 10/08/09

Req'd Qty: 1.00

Customer ID:

Customer Name:

Approvals:

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Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID	Work Center ID	Operation Description	Hours		Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
			Set Up	Run							
110	Skidtubes	Skidtubes	0.00	0.00							
	Skidtubes										
	Memo	1- Bend FWD end of tube using bend prog D3274 FWD dwg D3274, cut fwd end of tube with saw table setup D3274.									
		2- remove fwd indexing ridge as per dwg D3274. Prepare for welding									
		3- weld fwd cap as per dwg D3274 and QSI004 AR Aluminum Rod Batch: <u>M109213</u>									
		4- grind fwd cap weld on top surface only									
		5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.									
		6-Drill Aft cap pilot hole using DT8025									
		7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D. Drill 3/16" pilot holes as per Dwg D3274									
		8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #									
		9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.									

DP 9-9-29

AWM 9-9-29  
PD 09.09.30

DP  
9-10-6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

September 23, 2009 1:59:03 PM

**Reference:**

Revision ID: M

**Item Name:** Replacement Skidtube

**Start Date:** 9/25/09      **Start Qty:** 1.00

**Cust Item ID:**

**Required Date:** 10/08/09      **Req'd Qty:** 1.00

**Customer ID:**

**Customer Name:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

## Hours

[illegible]

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**Approvals:**

### Process Plan:

**Date:**

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**QC:**

**Date:**

**SPC (Y/N):**

Date:

[illegible]

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Item ID: D206-642-541

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Start Date: 9/25/09

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Customer Name:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Sequence ID	Work Center ID	Operation Description	Hours		Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
			Set Up	Run							
170	Skidtubes	Skidtubes	0.00	0.00							
		Memo									
		1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.									
		2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2 OPEN HOLES TO .297" Deburr									
		3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD END OF TUBE DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES) REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES									
		4- Countersink crossbolt spacer holes as per Dwg D3274									
		5- prepare for welding									
180	QC	QC5- Inspect part completeness to step on W/O	0.00	0.00							
	Quality Control										

Memo

DP 9-10-14

BE 09-10-14

27 8/10/14

(f1)

h2 300  
L2 4.8°

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**Approvals:** \_\_\_\_\_ **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

## Hours

Sequence ID	Work Center ID	Operation Description	Set Up	Run	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Skidtubes	Skidtubes	0.00	0.00							
	Memo	1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod A/R [ ] Aluminum Rod [ ] <i>MP 109213 BE 09/10/14</i> 3-Grind cross bolt welds flush as per Dwg D3274. <i>AUM 9-10-15</i> 4-Counterbore 5/16" x 0.750" deep as per Dwg D3274. Use DT8743 visual aid Jig and deburr.									
200	QC	QC5- Inspect part completeness to step on W/O	0.00	0.00							
	Quality Control										
	Memo										
210	QC	QC10- Inspect visual per QSI004- ground welds	0.00	0.00							
	Quality Control										
	Memo										
220	HandFinish	Pressure Wash per QSI005 4.3	0.00	0.00							
	Hand Finishing										
	Memo	<i>BK 09-10-14</i>									

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**Approvals:**

### Process Plan:

**Date:**

### Tooling:

**Date:**

**QC:**

Date:

**SPC (Y/N):**

Date:

Sequence ID	Work Center ID	Operation Description	Hours		Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
			Set Up	Run							
230	Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum <i>M112760</i> START TIME: <i>10:00</i> OVEN TEMPERATURE: <i>320</i> FINISH TIME: <i>10:30</i>	0.00	0.00							
	Memo				<i>BR. 09-10-19</i>			<i>(D)</i>			
240	QC Quality Control	QC3- Inspect Part Finish	0.00	0.00							
	Memo				<i>MO 09110/20</i>			<i>X1</i>			
250	HandFinish Hand Finishing	HandFinishing 1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets. A/RUN/A□ LPS-3□ <i>1/4</i> 2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a A/RUN/Sikaflex-291 □ <i>M112391</i> Sikaflex expire date: □ <i>10/20</i>	0.00	0.00							
	Memo				<i>MO 09110/20</i>			<i>X1</i>			
260	QC Quality Control	QC5- Inspect part completeness to step on W/O	0.00	0.00							
	Memo	Inspect Nut Plate & Inserts			<i>27 809/10/20</i>			<i>(D) f</i>			

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**Approvals:**

### Process Plan:

Date:

**Tooling:**

**Date:**

**QC:**

**Date:**

**SPC (Y/N):**

Date:

[illegible]

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Item ID: D206-642-541

Reference:

Revision ID: M

Item Name: Replacement Skidtube

Start Date: 9/25/09

Start Qty: 1.00

Cust Item ID:

Required Date: 10/08/09

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Customer ID:

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Approvals:

Process Plan:

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Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

## Hours

Sequence ID	Work Center ID	Operation Description	Set Up	Run	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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300	QC	QC21- Final Inspection - Work Order Release	0.00	0.00							
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Quality Control

Memo

09/10/29  
R/09-10-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

September 23, 2009 1:58:35 PM

Page 1

Work Order ID: 52423

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 9/25/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
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D2600-I-190RevD1

Manufactured

No

110

Each

74.0000

1.0000



Extrusion Round 3" 206

9-9-29

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST

47575

74

74

D3285-I-RevA

Manufactured

No

110

Each

34.0000

12.0000



Cap

1

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST

47635

34

34

D3282-041RevC

Manufactured

No

150

Each

10.0000

1.0000



Float Web (206L/407)

1 PD 09.09.30

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

LG

48389

10

10

9-10-6

1

✓

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 9/25/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2649RevB1		Manufactured	No			190	Each	711.0000	1.0000			
Cross Bolt Spacer												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

LG 83

51529 83

Main Warehouse

ST 628

36013 5

47112 383

48271 240

D3275-1RevA1		Manufactured	No			190	Each	100.0000	12.0000			
Crossbolt Spacer												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 100

47464 1

48117 43

48270 56

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Page 3

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Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
CR3212-4-03		Purchased	No			250	Each	314.0000	2.0000			



Cherry Rivet

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	314	
111359	96	
112314	200	
15984	18	

D3415-041RevB

Manufactured

No



Nut Plate

250

Each

95.0000

1.0000

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	95	
33842	95	

CCR264SS3-3

Purchased

No



Cherry Rivet

250

Each

271.0000

2.0000

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	271	
11548	56	
111827	115	
112314	100	

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Shop Packet Print

Page 3

X2 mo 09/10/20

X1 umo 09/10/20

X2 umo 09/10/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Comments:

Start Date: 9/25/09

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ALS4-1032-130		Purchased	No			250	Each	5,439.000	78.0000			
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Insert

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

110511

5439

5439

270

Each

43.0000

1.0000

D3536-15RevA

Manufactured

No



Gasket

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

47711

48159

51600

43

5

12

26

X78 MD 09/10/20

X1 MD 09/10/20

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Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
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Page 5

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Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3536-23RevA		Manufactured	No			270	Each	32.0000	1.0000			



Gasket

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP

12

51609

12

Main Warehouse

ST

20

30754

1

47713

19

D3536-35RevA

Manufactured

No

270

Each

41.0000

1.0000



Gasket

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

41

48160

15

51628

26

X1 MD 09/10/20

X1 MD 09/10/20

September 23, 2009 1:58:36 PM

Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 23, 2009 1:58:37 PM

Page 6

Work Order ID: 52423

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube


Comments:

Start Date: 9/25/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3536-39RevA		Manufactured	No			270	Each	30.0000	1.0000			
												
Gasket												

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

FP                      12

51637                      12

Main Warehouse

ST                      18

44648                      1

47714                      6

48161                      11

D3535-15RevB

Manufactured No

270

Each

15.0000

1.0000



Wearshoe

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST                      15

30750                      4

42233                      1

48155                      10

XI MD 09/10/20

XI MD 09/10/20

September 23, 2009 1:58:37 PM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 23, 2009 1:58:38 PM

Page 7

Work Order ID: 52423

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 9/25/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

D3535-35RevB

Manufactured

No

270

Each

12.0000

1.0000



Wearshoe

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST

12

48157

12

D3535-39RevB

Manufactured

No

270

Each

15.0000

1.0000



Wearshoe

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST

15

47525

2

48158

13

D3535-23RevB

Manufactured

No

270

Each

13.0000

1.0000



Wearshoe

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST

13

48156

13

X1 MD 09/10/20

X1 MD 09/10/20

X1 MD 09/10/20

September 23, 2009 1:58:38 PM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

September 23, 2009 1:58:38 PM

Work Order ID: 52423

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube


Comments:

Start Date: 9/25/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3537-3RevC		Manufactured	No			270	Each	72.0000	1.0000			
												
Wearpad												

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

ST	72	
30758	8	
33881	17	
35697	47	

D3537-1RevC

Manufactured No

270 Each 192.0000 9.0000



Wearpad

Warehouse                      Loc Qty                      Loc Code  
Location

Main Warehouse

FP	30	
48288	2	
50321	28	

Main Warehouse

FP17	162	
51678	162	

XI mo 09/10/20

XI mo 09/10/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 23, 2009 1:58:46 PM

Work Order ID: 52423

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 9/25/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

AN960C10L

Purchased

No

270

Each

6,864.000

80.0000



washer

Warehouse

Loc Qty

Loc Code

Location

OFFSHORE

FG

100

103585

100

Main Warehouse

ST

6764

112116

1764

112612

5000

AN960C416

Purchased

No

270

Each

706.0000

1.0000



washer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

706

100993

706

X 80 mo 09/10/20

X 1 mo 09/10/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 23, 2009 1:58:46 PM

Page 10

Work Order ID: 52423



Parent Item: D206-642-541RevM



Parent Item Name: Replacement Skidtube

Start Date: 9/25/09

Required Date: 10/08/09

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3672-1RevB		Manufactured	No			270	Each	1,186.000	2.0000			
Phenolic Washer												

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST

686

39275

19

42329

121

47628

546

Main Warehouse

ST117

500

51674

500

X2 MD 09/10/20

AN3C4A

Purchased

No

270

Each

1,976.000 80.0000



BOLT



## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

ST

1976

112082

14

112314

140

112612

146

112720

1176

112724

500

112794

X80 MD 09/10/20

September 23, 2009 1:58:46 PM

Shop Packet Print

Page 10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 23, 2009 1:58:51 PM

Work Order ID: 52423

Parent Item: D206-642-541RevM

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 9/25/09

Required Date: 10/08/09

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

AN4C5A Purchased No

270

Each

603.0000

1.0000



BOLT

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

ST

603

104936

19

10552

82

112243

500

18918

2

D2646RevC

Manufactured

No

270

Each

56.0000

1.0000



Aft Cap

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

ST

56

20208

0

43801

1

46327

6

48109

49

XI MO 09/10/20

XI MO 09/10/20

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

September 23, 2009 1:58:52 PM

Work Order ID: 52423



Parent Item: D206-642-541RevM



Parent Item Name: Replacement Skidtube

Start Date: 9/25/09

Required Date: 10/08/09

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3413-1RevA		Manufactured	No			270	Each	22.0000	1.0000			



Ring



Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

22

48123

22

X1 MO 09/10/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

RELEASED

07.02.12

DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED #	APPROVED #	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY	SCALE NTS
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

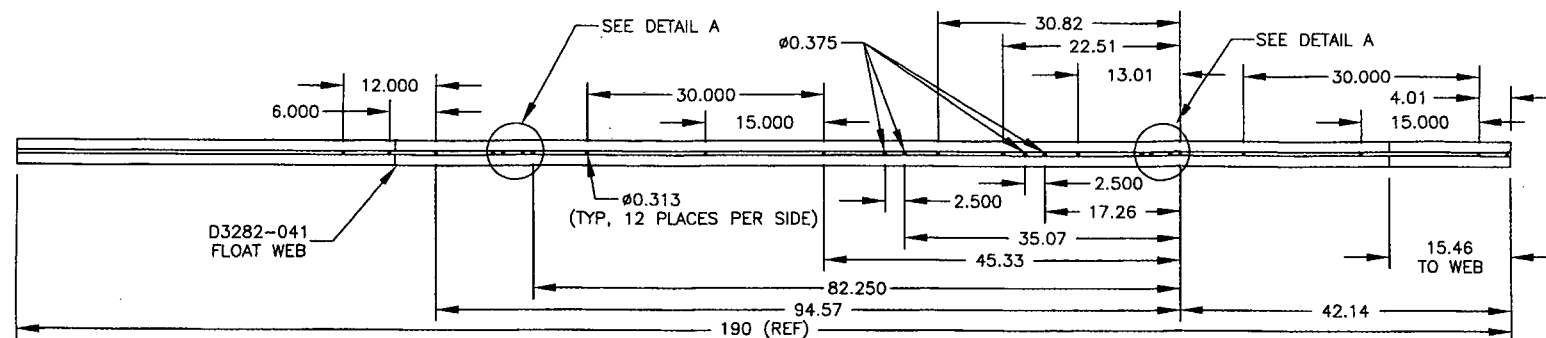
## GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1  
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

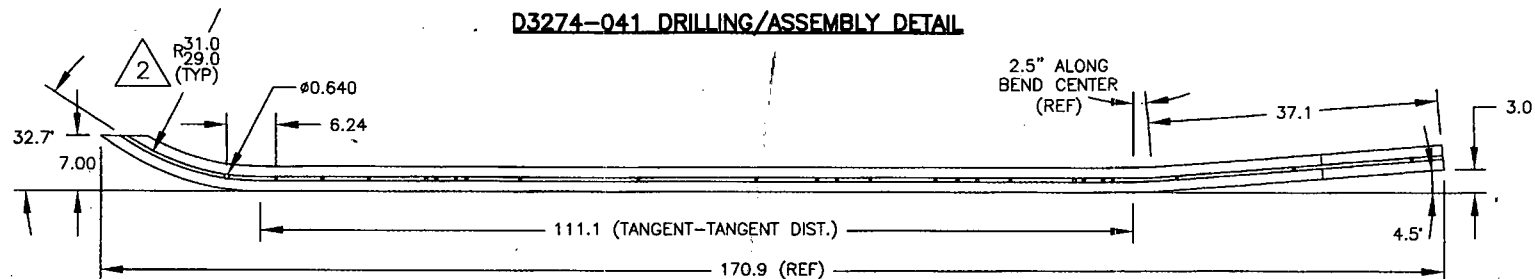
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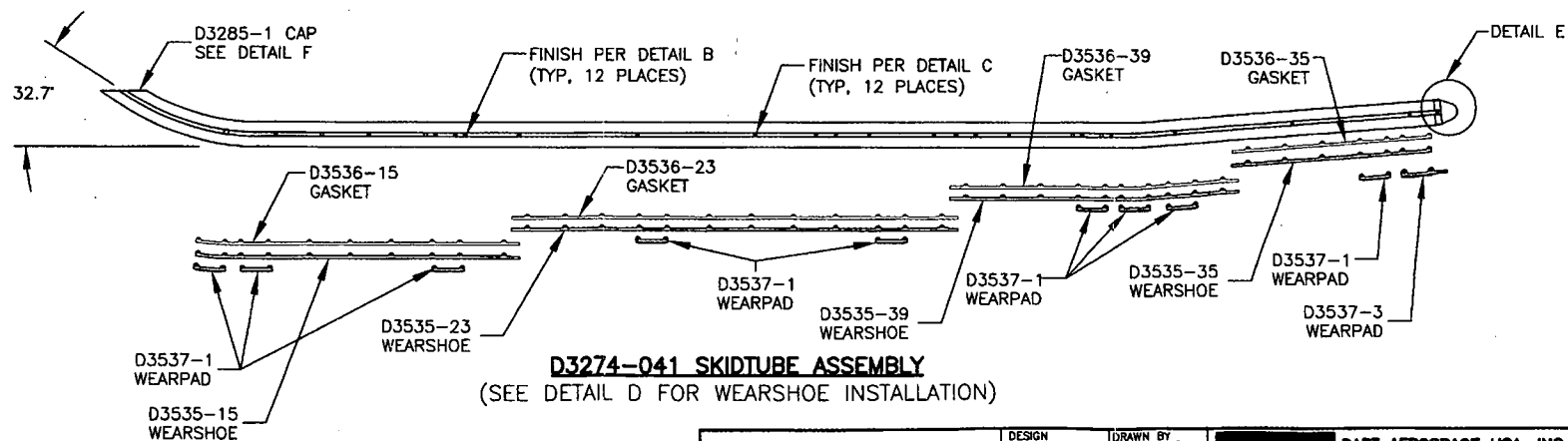
DEO ATTACHED



**D3274-041 DRILLING/ASSEMBLY DETAIL**



**D3274-041 BEND/DRILLING DETAIL**



**D3274-041 SKIDTUBE ASSEMBLY**

(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

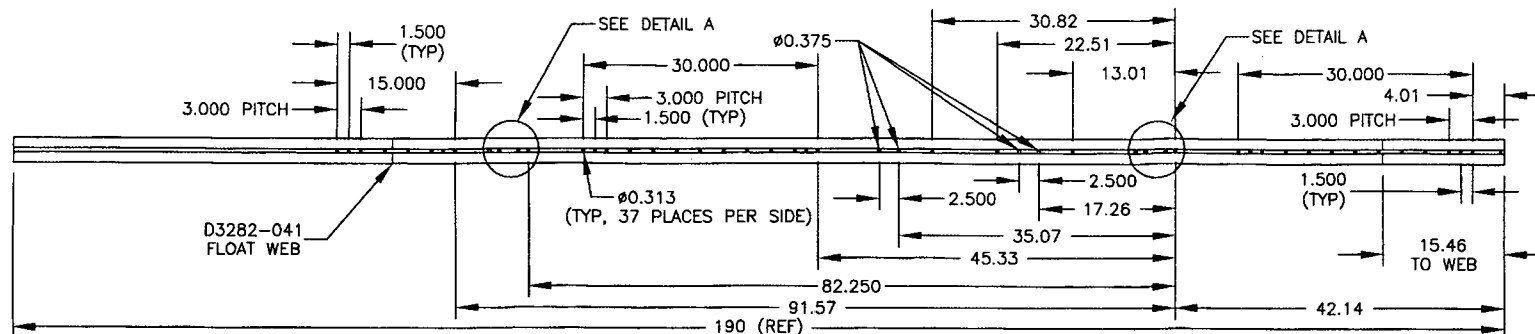
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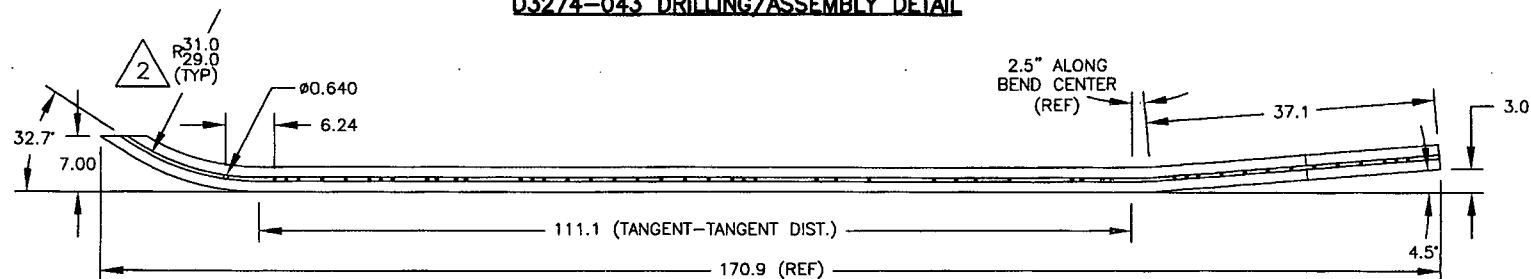
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DESIGN	CP	DRAWN BY	PH	<b>DART</b>	DART AEROSPACE USA, INC.
CHECKED	#	APPROVED	#	DRAWING NO.	D3274
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY		
				REV. D	SHEET 2 OF 2

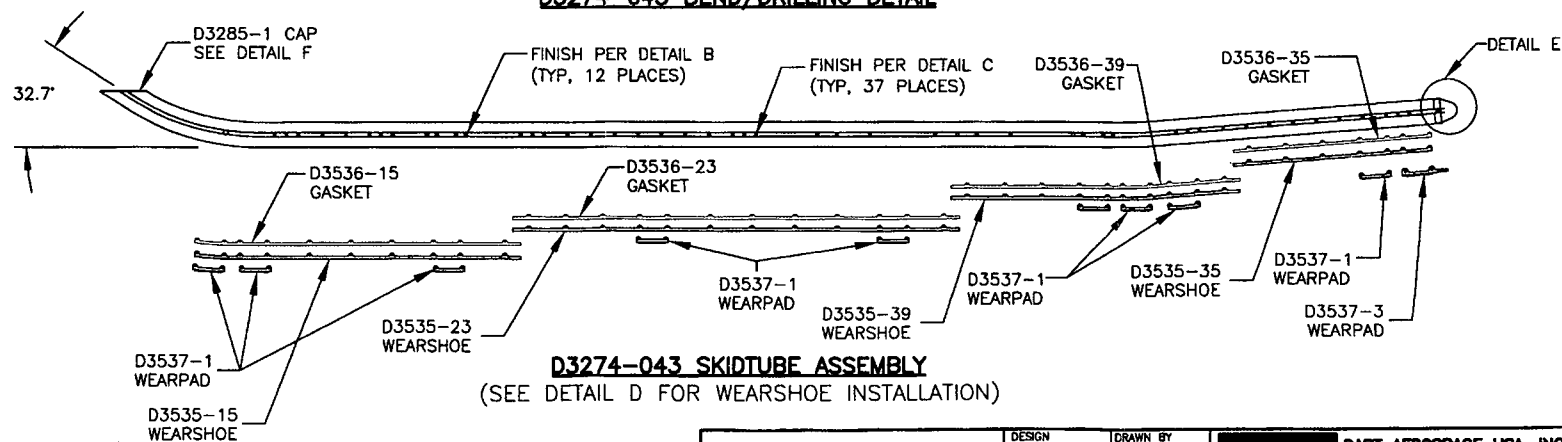
DEO ATTACHED



**D3274-043 DRILLING/ASSEMBLY DETAIL**



**D3274-043 BEND/DRILLING DETAIL**



**D3274-043 SKIDTUBE ASSEMBLY**  
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

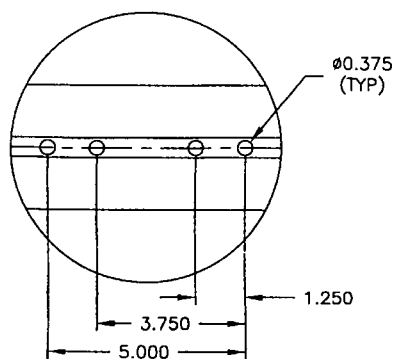
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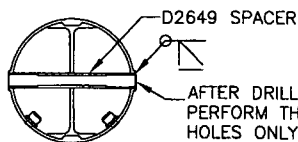
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DESIGN	CP	DRAWN BY	PH	<b>DART</b> DART AEROSPACE USA, INC. PORT HADLOCK, WA
CHECKED	PH	APPROVED	PH	
DATE	06.12.19	DRAWING NO.	D3274	REV. D
TITLE				SHEET 3 OF 4
SKIDTUBE ASSEMBLY				

# **DETAIL A: DRILL DETAIL**

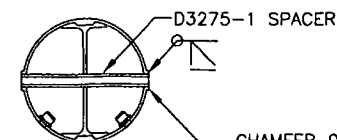


# **DETAIL B** FOR 0.375 HOLES ONLY



- AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR 0.375  
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
  2. INSERT D2649 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. C'BORE TO 0.313x0.75 DEEP

# **DETAIL C** FOR 0.313 HOLES ONLY



CHAMFER 0.030x45°  
(TYP)

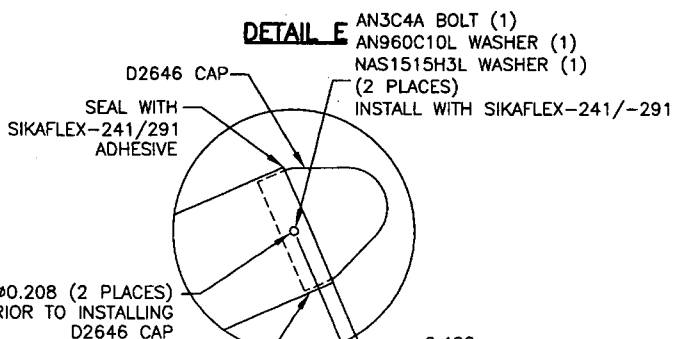
# **DETAIL D**



- ALS7-1032-130 INSERT (1)  
AN3C4A BOLT (1)  
AN960C10L WASHER (1)  
(78 PLACES)

GASKET/WEARSHOE/WEARPAD (REF)

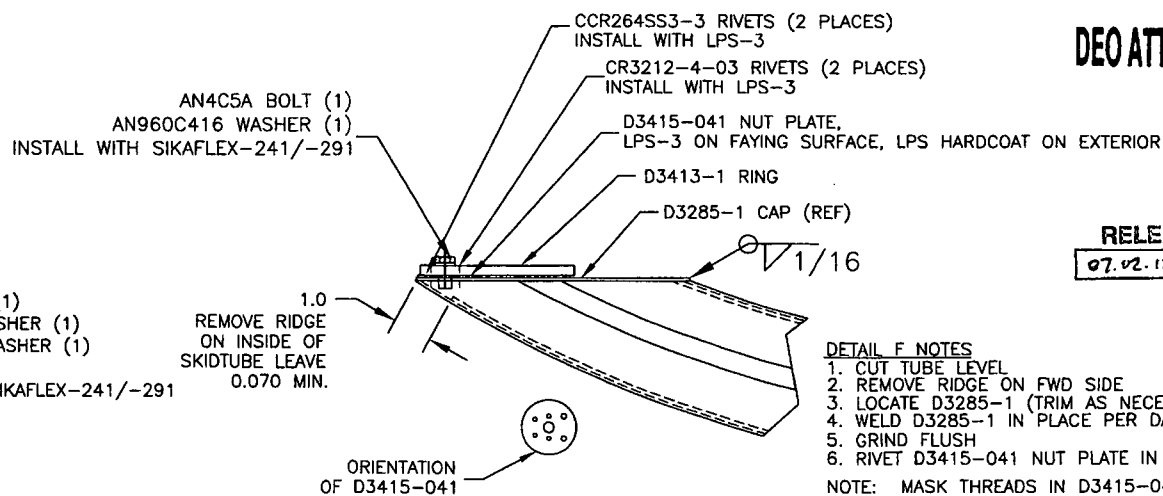
# **DETAIL E**



0.208 (2 PLACES)  
DRILL PRIOR TO INSTALLING  
D2646 CAP

BORE OUT END OF SKIDTUBE  
TO 0.75 DEPTH AND 0.070 WALL

# **DETAIL F: END FINISHING DETAIL**



# **DETAIL F NOTES**

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041  
PRIOR TO FINISH

**DEO ATTACHED**

**RELEASED**

07.02.12

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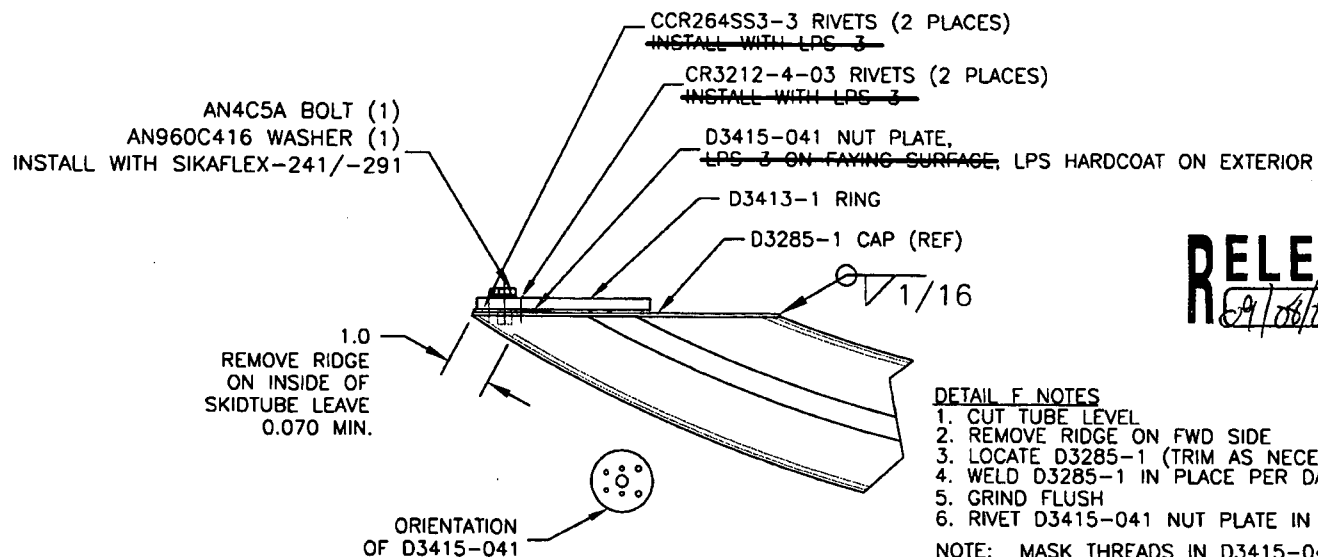
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	<b>DART AEROSPACE USA, INC</b>	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>1</i>	MFG. APPR. <i>1</i>	APPROVED <i>MAP</i>	DE APPR. <i>1</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: ~~"SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS-3' AFTER FINISH AND INSTALLATION OF INSERTS.~~  
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF  
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

### DETAIL F: END FINISHING DETAIL



#### DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041  
PRIOR TO FINISH

NO. 211

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 52411  
Part number: D206-642-541  
Description: 206 skid  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminum  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual:

pass[☒] fail[ ]

Penetration:

pass[☒] fail[ ]

UNACCEPTABLE

Cracks:

pass[☒] fail[ ]

Undercut:

pass[☒] fail[ ]

Pin holes:

pass[☒] fail[ ]

Overlap (cold lap)

pass[☒] fail[ ]

Porosity (surface):

pass[☒] fail[ ]

Coloration:

pass[☒] fail[ ]

Qualifier Pct. Paul

Date of Test Coupon 09-10-09

Welder Barclay Elliott

Date of Test Coupon 09-10-09

The above named individual is qualified in accordance with AWS D17.1.2001 to weld